ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Frequently Asked Questions on Testing Automatic Line Leak Detectors

STORAGE TANK PROGRAM

The failure of pressurized piping remains the primary source of petroleum contamination from underground storage tank (UST) systems today. Automatic line leak detectors (ALLD) are required to prevent this. But do ALLDs work properly after installation? The only way to know is to test the device every year as required by law. The requirements for testing can be complicated. Here are answers to frequently asked questions about ALLDs for UST owners, operators, testers and inspectors.

What is an ALLD and what does it do?

An ALLD is an electronic or mechanical device that continuously monitors for catastrophic releases from underground piping. The device looks for a drop in pressure greater 3 gallons per hour (gph) each time the dispenser is activated.

Are there advantages in using an electronic device versus a mechanical ALLD?

Electronic line leak detectors are new to the market but are becoming popular. One advantage is that they can do a monthly and annual precision test, eliminating the need for interstitial monitoring or annual line tightness testing. They also seem to run better in cold climates.

What happens if a leak is detected?

The ALLD should, within one hour of detecting a leak, activate a flow restrictor, shut-off or alarm. These are your indicators there may be a problem. Some electronic ALLDs trigger positive turbine shutdown when a release is detected.

Is an ALLD required on all pressurized piping systems?

Yes. All underground pressurized piping must have one of these devices.

Is a stand-alone sump sensor for double-wall piping permitted to replace a traditional ALLD?

Stand-alone sump sensors are no longer allowed as a substitute for a line leak detector. If you have a stand-alone sump sensor, you should have an ALLD installed immediately on each pressurized line.

Are there any requirements to maintain my ALLD?

Yes. The ALLD must be tested annually to make sure it is functioning properly.

Who can test an ALLD?

A person who is knowledgeable in ALLD devices should do the testing. While no specific certification is required for the tester, ADEC recommends using a licensed tank installer, inspector, tightness tester, or manufacturer trained technician.

ALLD means
Automatic Line Leak Detector

How is an ALLD tested?

The tester attaches a test device to the ALLD and simulates a leak to see if the ALLD activates and at what rate. The tester must use a method and equipment approved by the manufacturer.

Is the test protocol for all ALLD brands the same?

For mechanical devices, yes. The protocols are essentially the same. They may vary slightly on certain test variables but the procedures are similar. However, test methods for electronic ALLDs can vary.

Is the ALLD testing equipment the same for all brands?

For mechanical devices, yes. A person should be able to use one ALLD testing device for any brand, although some limitations may apply. For electronic devices, see manufacturer's literature for specific test requirements.

Must an ALLD achieve a minimum detectable leak rate of 3 gallons per hour "out of the box" and every year thereafter?

Ultimately, an ALLD must meet annual performance measurements set out by the manufacturer. FE Petro, EBW, Vaporless and Veeder-Root all require the ALLD to meet a 3-gph test annually. Red Jacket has two methods, one that requires a 3-gph rate (quantitative) and one that is a no-rate test (qualitative). Either is allowed, although ADEC suggests using the quantitative one to achieve a 3-gph leak rate. This reduces the risk of releases to the environment.

Common ALLD Brands in Alaska

Red Jacket
Vaporless
Veeder-Root
FE Petro
EBW

At what point should an ALLD be replaced?

FE Petro, Vaporless, EBW and Veeder-Root suggest replacement of an ALLD that cannot achieve a 3-gph rate. Red Jacket leaves the decision to replace up to the owner, although states that an ALLD that cannot achieve better than 5 gph should be "seriously assessed" for replacement. ADEC advises owners of Red Jacket units that fail a 3-gph test to replace the unit.

Where do I get more information about these test procedures?

See the following Internet web sites:

Red Jacket Mechanical: http://www.redjacket.com/doc/051-272-1.pdf
Red Jacket Electronic: http://www.redjacket.com/doc/RJE-127.pdf

EBW:
http://www.ebw.com/products/ems/ems.htm

FE Petro: http://www.fepetro.com/

Vaporless: http://www.vaporless.com /Test%20Req.htm

Veeder-Root: http://www.veeder-root.com /dynamic/index.cfm?PageID=117

Any questions?

- **Call:** 907-465-5200 (Juneau) or 907-269-7537 (Anchorage) or toll-free in Alaska 800-478-4974.
- **Internet:** http://www.state.ak.us/dec/spar/csp/tanks.htm
- **Email:** CSwebmaster@dec.state.ak.us